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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/709,710	05/24/2004	Nien-Hui Hsu	OTMP0079USA	3709
27765	7590	01/25/2006	EXAMINER	
NORTH AMERICA INTELLECTUAL PROPERTY CORPORATION P.O. BOX 506 MERRIFIELD, VA 22116			BLACKMAN, ROCHELLE ANN J	
			ART UNIT	PAPER NUMBER
			2851	

DATE MAILED: 01/25/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/709,710

Applicant(s)

HSU ET AL.

Examiner

Rochelle Blackman

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– The MAILING DATE of this communication appears on the cover sheet with the correspondence address –
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 November 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 May 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 10/24/05.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

Applicant's arguments with respect to claims 1-15 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 1-10 and 12-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ohishi et al. (U.S. Patent Application Publication No. 2002/0163627) in view of Fuse et al. (U.S. Patent No. 6,280,038).

Regarding claim 1, Ohishi discloses an intake structure, installed in a projection apparatus (see FIGS. 1-12) which has at least one heating element (for example, see 11, 11a of FIGS. 1, 2, 7, 8, and 10, comprising: at least one intake port (for example, see 36 of FIG. 7) disposed on said projection apparatus; at least one air duct (see 38 of FIG. 7) and an outlet (see 39 and 40 of FIG. 7) of said air duct being disposed near said heating element; and an exhaust fan (for example, see 23 of FIGS. 1, 2, and 8) disposed near said heating element for exhausting air passing by said heating element,

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an exhaust side of said exhaust fan facing said heating element (see location of 23 relative to 11a in FIGS. 1, 2, 8, and 10).

Regarding claim 2, Ohishi discloses wherein said air duct has a bent air path (see shape of 38 in FIG. 7).

Regarding claims 3 and 5, Ohishi discloses wherein the outlet of said air duct is connected to at least one splitting duct (see 38-40 in FIG. 7).

Regarding claim 4, Ohishi discloses wherein said air duct has a straight air path (see 38 in FIG. 7).

Regarding claim 7, Ohishi discloses wherein said exhaust fan is disposed near said heating element and said air duct for guiding outside air stream flowing through said heating element (see location of 23 in FIGS. 1, 2, and 8).

Regarding claim 8, Ohishi disclose wherein the area of said inlet of said air duct to be set depends on the area of said intake port (see "intake port" 36 relative to the inlet of "air duct" 38).

Regarding claim 9, Ohishi disclose wherein the quantity of said air duct to be set depends on the quantity of said heating element (for example, see "air ducts" 39 and 40 relative to "heating elements" 11a, 51R, 51B in FIG. 7).

Regarding claim 10, Ohishi discloses wherein the distance between said heating element and the outlet of said air duct is 1 to 10 mm (for example, see distance

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between outlet of "air ducts" 39 and/or 40 and "heating elements" 11a, 51R, 51B in FIG. 7).

Regarding claim 12, Ohishi discloses wherein said heating element is relay lens (see 58a, 58d of FIG. 8).

Regarding claim 13, Ohishi discloses wherein said heating element is a condenser (see 59a, 59c in FIGS. 7 and 8).

Regarding claim 14, Ohishi discloses wherein said heating element is an electronic component (although not shown, this is considered to be the *liquid crystal panel drive circuit* that is attached to each of the drives liquid crystal panels or "heating elements" 51R, 51G, 51B, in FIGS. 7 and 8, discussed on pg. 4, paragraph [0040]).

Ohishi does not appear to disclose the inlet of said air duct being "directly connected to" said intake port.

Fuse teaches providing an inlet of an air duct (see 95 of FIG. 1) being directly connected to an intake port (see 91 of FIG. 1).

It would have been obvious to one ordinary skill in the art at the time the invention was made to provide the intake structure of the Ohishi reference with an air duct being directly connected to an intake port, as taught by Fuse for the purpose of preventing cooling air leakage, thus improving cooling efficiency of the heating elements.

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2. Claims 11 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ohishi et al. (U.S. Patent Application Publication No. 2002/0163627) in view of Fuse et al. (U.S. Patent No. 6,280,038) as applied to claim 1 above, and further in view of Bok (U.S. Patent Application Publication No. 2002/0180938).

Ohishi and Fuse disclose the claimed invention including "heating elements" that are multi-lens arrays 53a and 53b of FIG. 8 of Ohishi and first and second lens array 7 and 9 of FIG. 1 of Fuse for light integration and dichroic mirrors 57a and 57b of FIG. 8 of Ohishi and dichroic mirrors 10 and 15 used to split light into different colors. However, Ohishi and Fuse does not appear to disclose heating elements that are an "integration rod" and a "color wheel".

Bok teaches providing heating elements that are an integration rod (330, 430, 530 of FIGS. 3-5) used to integrate light and a color wheel (see 320, 420, 520 of FIGS. 3-5) used to split light into different colors. It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the projection apparatus of the combined Ohishi and Fuse reference with a integration rod and color wheel, since an integration rod and lens arrays and/or a color wheel and dichroic mirrors are equivalent structures used in the art and the selection of any of these known equivalents to integrate light and/or split light into different colors would be within the level of ordinary skill in the art.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rochelle Blackman whose telephone number is (571) 272-2113. The examiner can normally be reached on M-F 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Judy Nguyen can be reached on (571) 272-2258. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

RB

A handwritten signature in black ink, appearing to read 'W B Perkey', with a long, sweeping horizontal stroke extending to the right.

William Perkey
Primary Examiner